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BACKGROUND PAPER MARCH 1990

THE IMPLICATIONS OF THE INF TREATY

by Jane Boulden

On 8 December 1987 in Washington, DC, US President Reagan and Soviet General Secretary Gorbachev signed the Treaty on the Elimination of Intermediate-range and Shorter-range Missiles, also known as the INF Treaty. The INF Treaty represents the culmination of six years of on-again, off-again negotiations between the two countries, and embodies some important firsts in the arms control world. It is the first time the two superpowers have agreed to major reductions in their nuclear arsenals; to eliminate an entire class of nuclear weapons; and to implement on-site inspections as a means of verification.

On the political side, the INF Treaty brought an end to a long and often divisive debate within NATO about the necessity and effect of deploying Pershing and ground-launched cruise missiles in Europe. At the same time, the Treaty has brought to the forefront a debate on the role and status of conventional weapons in both Eastern and Western European alliances, and another on the future of short-range nuclear forces (SNF) in Europe. This paper will describe the terms and requirements of the Treaty and its implementation process. The new concerns that have arisen within NATO as a result of the successful completion of the Treaty will also be addressed.

THE TREATY

The Treaty officially entered into force on 1 June 1988. It affects land-based ballistic and cruise missiles which can travel distances between 1000 km and 5500 km, known as intermediate-range, as well as those which can cover distances between 500 and 1000 km, called shorter-range missiles. Under the terms of the Treaty, the US and the Soviet Union have agreed to completely eliminate all their land-based intermediate-range and shorter-range missiles, as well as the launchers, operating bases, support equipment and facilities associated with them. Shorter-range missiles, launchers and support equipment are to be eliminated within the first eighteen months of the life of the Treaty, and the entire elimination process is to be completed within three years of entry into force.

Flight-testing of shorter-range and intermediate-range missiles, and launches of shorter-range missiles, are completely prohibited. There can be no production of any missiles, missile stages or launchers within the prohibited categories. The complete elimination of all missiles in these categories, and the bans on production and testing, mean that any missile or missile component existing after the elimination period is over constitutes a violation.

The Treaty consists of four parts: the text of the Treaty, a memorandum of understanding, a protocol on the elimination of missiles, and a protocol on inspections. The Treaty itself is made up of seventeen articles and includes the main provisions. The Memorandum of Understanding Regarding the Establishment of the Data Base (MOU) contains all the information given in the first data exchange, including missile numbers, technical characteristics and locations. The Protocol on Procedures Governing the Elimination of Missile Systems provides a detailed outline of the procedures to be followed in eliminating

each element of a given missile system. Finally, the Protocol Regarding Inspections outlines the procedural guidelines to be followed during the inspection process.

All elimination of missiles, launchers and equipment occurs at elimination facilities which have been designated in the MOU. Because of the intrusiveness of the inspection process, the nuclear warhead and guidance system of the missile are removed before being transferred to the facility, in order to protect the secrecy of warhead design. Support structures are eliminated *in situ*.

The elimination protocol outlines specific methods of destruction for each type of missile and launcher. For example, cruise missiles are sliced in half lengthwise, their tails and wings are removed from the body, and their front sections crushed. Ballistic missiles are destroyed by explosive demolition or burning. For the first six months of the Treaty both parties were also permitted to destroy up to one hundred missiles by launching them from elimination facilities. All elimination procedures are subject to on-site inspection.

VERIFICATION

National Technical Means (NTM)

A series of verification measures which interact with and support each other are established in the INF Treaty. At the core of this structure is national technical means of verification (NTM). NTM consist of satellite reconnaissance and other forms of monitoring which do not require the assistance or consent of the other party. In the past NTM has been the primary means of monitoring the SALT agreements and the ABM Treaty.

Under the terms of the INF Treaty, NTM are facilitated by requirements which limit Treaty activities to designated areas. Missiles and launchers can be destroyed only in certain specified locations or at an elimination facility. Within thirty days after the Treaty entered into force, all missiles and launchers were required to be at one of these designated areas. Missiles, launchers and equipment that were found at a non-designated area constituted a violation.

Exchange of Data

Under the Treaty, NTM are supplemented by a regular exchange of data between the two parties. The MOU includes data on the numbers, types, location, and technical characteristics of the missiles and launchers valid as of 1 November 1987. An update on this data was provided thirty days after the Treaty entered into force, and further updates are provided at six-month intervals. The data contained in these updates is organized into agreed categories. This information is provided through the Nuclear Risk Reduction Centres (NRRC) which were established by the superpowers in an earlier 1987 agreement.

INSPECTIONS

Inspection Procedures

Inspection is a vital part of the verification structure established in the INF Treaty. The general terms of inspection are set out in detail in the Protocol on Inspection. Each side uses its own aircraft and equipment for inspection. A flight-plan must be filed with the NRRC, and the designated points of entry must be used to enter each country. Upon arrival, the equipment brought in by the visiting country is subject to inspection by the host country to ensure that the imported materials are not capable of carrying out non-treaty-related activities. Inspections are carried out by teams whose numbers vary depending on the type of inspection. Each team must have at least two members who can speak the language of the inspected country.

Types of Inspection

There are six different types of inspection included in the Treaty:

- baseline inspections
- inspections of the elimination process
- inspections to confirm elimination of missiles, launchers, etc.
- inspections to confirm elimination of support facilities, etc.
- short-notice inspections
- permanent portal monitoring.

The purpose of baseline inspections is to verify the accuracy of the initial data. These inspections began thirty days after the Treaty entered into force and lasted sixty days. Within that period, each side visited all the facilities and installations of the other, in order to confirm the accuracy of the information given in the initial data exchange. Regular updates, exchanged at six-month intervals, provide an ongoing check on the elimination proceedings as the Treaty is implemented. These data exchanges are verified through inspections of the elimination process, or by short-notice inspections.

On-site inspections of the elimination process monitor the destruction of missiles, launchers and equipment. Inspectors watch the elimination process, make sure that it is carried out according to the terms of the Treaty, and keep track of what is destroyed.

Inspections to confirm elimination simply ensure that the destruction process for missiles, launchers and associated equipment has been completed. Likewise,

inspections to confirm elimination of support facilities (other than production facilities) and operating bases verify that this process has been carried out.

Short-notice inspections are a breakthrough; for the first time the superpowers have implemented an agreement which gives them the right to request short-notice inspections of designated sites. This enables the parties to check any suspicious findings. Or one side may simply wish to confirm quickly any reported data so that the other side does not have time to change sites before the inspectors arrive.

The inspecting state must give sixteen hours notice of arrival at a point of entry, and then four to twenty-four hours notice of the site to be inspected. Missile operating bases and support facilities designated in the Treaty, other than elimination facilities and production facilities, are subject to this type of inspection. Twenty of these inspections are permitted each year for the first three years, with the quota declining to fifteen for the next five years, and ten over the last five years.

The Treaty specifies that each party shall construct a permanent portal monitoring system around the perimeter of one designated production facility in the other country. This form of inspection was included to deal with the problem of the similarity between the SS-20, an intermediate-range missile, and the SS-25, a long-range missile not covered by the Treaty.

In the Soviet Union, the US has established a monitoring team at a former SS-20 facility at Votkinsk which continues to produce stages of the SS-25 missile. In the US, the Soviet Union monitors a plant in Magna, Utah, which previously produced parts for the intermediate-range Pershing II missile and currently produces parts for the long-range MX missile.

All shipments from the site with containers large enough to carry a missile, or the longest missile stage, must be declared. Containers which are declared to carry missiles are subject to weighing and measuring. Eight times each year the inspecting party has the right to ask that the container be opened so that the type of missile can be checked. All vehicles are subject to inspection to check whether they are large enough to carry the missile in question. If the vehicle is large enough for that purpose it is subject to internal inspection.

On-Site Inspection's Debut

On-site inspection has traditionally been advocated by the US and resisted by the Soviet Union. When the Soviet Union finally agreed to short-notice inspections in the INF Treaty negotiations, the reality of the system struck home for the first time in the US. The implications of Soviet inspectors at sensitive US military installations led to a debate about the degree to which this form of inspection was required. The result was a shift in the US position to more limited forms of on-site inspection. This shift was made possible when the two sides agreed to move away from a treaty which would have left one hundred remaining warheads, to pursue the complete elimination of all missiles in this category. It is easier to verify the complete elimination of a system, since *any* prohibited part of the system thereafter constitutes a violation. In the case of retaining one hundred warheads, the production, storage and deployment sites would have to be continuously monitored.

The successful implementation of the on-site inspection provisions in this Treaty is an important precedent for other arms control negotiations. For years the US has advocated on-site inspection and pointed to the unwillingness of the Soviet Union to agree to such measures as an indication of the Soviet lack of seriousness about arms control. However, the recent resistance of US policymakers to Soviet inspectors on US soil must also be taken into consideration and will probably play a role in other arms control negotiations.

COOPERATIVE MEASURES OF VERIFICATION

Towards the end of the INF negotiations, the Soviet Union informed the US that the first stage of the SS-25

Table I Summary of Inspection Provisions

Inspection Type	Team Size	Prior Notification	Frequency Duration
Baseline (Article XI,3)	10	16 hours	begin after 30 days, end 60 days later
Facility Elimination (XI, 4)	10	16 hours	done within 60 days of notification of elimination
Short-Notice (XI, 5)	10	16 hours	lasts 13 years, 20/yr for 3 yrs, 15/yr for 5 years, 10/yr for 5 years
Portal Monitoring (XI,6)	30	n/a	lasts 13 years begins after first 30 days
Elimination Process (XI,7)	20	72 hours	3 years
Completion of Elimination Process (XI,8)	20	72 hours	3 years

missile, a mobile missile with intercontinental range, was visually similar to the first stage of the SS-20 missile, slated for destruction under the Treaty. In order to avoid the possibility that the first stage of the SS-25 might be confused with the first stage of the SS-20 (whose presence would be a violation of the Treaty), and to ensure that SS-25 production and deployment was not serving as a cover for the buildup of an illegimate SS-20 force, the two sides developed specific cooperative verification measures, which complement the verification done by portal monitoring.

Within six hours of a request from the US, the Soviet Union must open the roofs of the fixed structures for SS-25 launchers and leave them open for twelve hours. The SS-25 missiles must be displayed so that they can be photographed by satellite. Six such requests can be made each year. If the US was to deploy an ICBM with a stage similar to a stage of one of its INF missiles, these procedures would apply to them as well.

SPECIAL VERIFICATION COMMISSION

A consultative mechanism, known as the Special Verification Commission (SVC), acts as the final check in the verification procedure. If questions are not resolved through the verification process, or by a short-notice inspection, each party to the Treaty can call a meeting of the SVC to discuss the matter. Here each party can raise questions of compliance or interpretation. Meetings of the SVC can be held at whatever level is required — technical, political or diplomatic. In most cases, it is desirable to deal with a matter at the technical level before it becomes a political issue, but the SVC allows a question to move right up to the diplomatic level, if it cannot otherwise be resolved. Unlike the Standing Consultative Commission (SCC), established under the SALT treaties, the SVC does not meet regularly. A meeting of the SVC, held in Geneva, is convened upon request, whenever it is deemed necessary.

BASING COUNTRY AGREEMENTS (BCA)

European countries are not signatories to the Treaty, but some have INF missiles based on their territories. These 'basing countries' signed separate agreements with each of the superpowers. The US undertook an exchange of notes with Czechoslovakia and East Germany. A similar exchange occurred between the Soviet Union and each of Belgium, Great Britain, Italy, the Netherlands and West Germany. These five Western countries also signed an agreement with the US detailing how the notification and inspection process would be handled. Such basing country agreements (BCA) formalize the willingness of European countries to accept the Treaty's inspection process, and will help to ensure that the process is carried out properly.

Table II INF Treaty Verification Structure
National Technical Means (NTM)
Exchanges of Data
Baseline Inspections to verify initial data exchange
Elimination inspections to verify proper procedure and completion of elimination
Permanent Portal Monitoring at a production facility
Cooperative Measures
Short-Notice Inspection
The Special Verification Commission

IMPLEMENTATION

Institutions

The Nuclear Risk Reduction Centres (NRRC) were established by the US and the Soviet Union in 1987 to ensure an adequate form of communication between the superpowers, and to help lower the chances for the outbreak of nuclear war. All notifications of inspections and all data exchanges under the INF Treaty are carried out through these centres.

In the Soviet Union the NRRC structure is also used to carry out the inspection requirements of the Treaty. In the US, however, a new organization, the On-Site Inspection Agency (OSIA) was established to meet the US inspection requirements. OSIA was instituted in January 1988 under the direction of the US Department of Defense (DOD). A DOD-appointed representative runs OSIA, aided by two Deputy Directors, one appointed by the State Department, and one appointed by the FBI. This interagency mix reflects the range of requirements that the inspection process must meet — from internal security, to arms control, to national defence.

When the Treaty first entered into force the Soviet Union and the US supplied each other with three lists of two hundred people each: one list of aircrew; one list of inspectors for routine and short-notice inspections; and one list of inspectors for the portal monitoring system. The names on these lists can be changed, but all personnel are subject to approval by the other party.

Progress

For the most part the Treaty has been successfully implemented to date. As of 1 June 1989, the first anniversary of the Treaty, 324 US missiles and 945 Soviet missiles had been destroyed. Thirty-five of seventy-two

Soviet missile bases had been dismantled. Both sides used their full complement of twenty short-notice, on-site inspections during the year. The Soviet Union had conducted ninety-six routine elimination inspections while the US had conducted 224 of these inspections.[1] The differences in the numbers are due to the larger number of missiles and facilities the Soviet Union possessed when the Treaty went into force.

Compliance

Some minor compliance issues have arisen during the first year of the Treaty. For the most part, they have been associated with errors in following the detailed procedures correctly. For example, some treaty-limited items were found outside designated locations in the Soviet Union. This was because of problems with the site diagrams. The site diagrams were changed, as permitted by the Treaty, to include the storage facilities and the issue was resolved.

Some questions relating to the data exchange also arose. The Soviet Union wanted the US to reveal the location of twenty-one older Pershing 1A missiles, owned by West Germany, but stored in the US. The US maintained that the missiles were owned by West Germany and should be dealt with outside of the Treaty. In the end, after consultation with West Germany, the US agreed to inform the Soviet Union of their location.

Other questions of implementation, such as specifics about equipment use and other details not specified in the Treaty, are being dealt with at the Special Verification Commission.

Aftermath

The total number of missiles and launchers to be destroyed under the INF Treaty represents only four to five percent of the total nuclear arsenals of the two superpowers. In the immediate aftermath of the signing of the Treaty, a debate developed about whether and how the US and the Soviet Union would offset the loss of the missiles. For example, more aircraft could be deployed in the area, or the number of missile-carrying submarines in the region could be increased. Critics argued that such actions would infringe on the spirit of the Treaty and possibly threaten whatever political stability was to be gained by the elimination of the missiles.

It must be remembered that the INF Treaty came about during a relative vacuum in the arms control scene. At the time of its signing, there were no enforceable limits on strategic nuclear forces. Since the INF Treaty exists in isolation, the threat it removes is covered, intentionally or otherwise, by the existence of a large number of strategic nuclear weapons. The success of the INF Treaty in reduction of numbers is therefore minimized. This will be true until the INF Treaty is followed up by reductions in strategic nuclear weapons.

IMPORTANCE OF THE INF TREATY FOR OTHER NEGOTIATIONS

What's New in the INF Treaty?

The successful elimination of an entire class of nuclear missiles is clearly an important achievement for arms control. This is especially so after the end of US adherence to the strategic arms limitation treaties (SALT) and difficulties over the interpretation of the anti-ballistic missile treaty.

The precedent set by this Treaty was made even more striking by the willingness of the Soviet Union to accept the principle of asymmetric cuts in INF forces. When the Treaty was signed, the Soviet Union had a total of 470 deployed INF missiles to the US' 429, and 484 to 214 US deployed launchers. In the shorter-range missile category the Soviet Union undertook to destroy a total of 926 deployed and non-deployed missiles, while the US had a total of only 178 missiles to destroy. Soviet willingness to undertake such asymmetric cuts bodes well for the negotiations on conventional forces, where the Soviet Union enjoys a numerical advantage in certain categories of non-nuclear weaponry as well.

US wariness about intrusive verification is also a precedent. It is not clear to what degree this hesitancy will carry over to affect the US position in other arms control forums. In the INF negotiations an attractive and relatively simply way out was found in the shift to complete elimination of the missiles. However, for all of its attraction, zero in any given category of missiles is not a likely outcome in the START negotiations. The INF Treaty has therefore provided the first step in what will be a lengthy process of determining the balance between how much intrusiveness is necessary to ensure compliance, and how much can be tolerated without threatening state sovereignty and security.

START Verification System

The structure of verification measures established under the INF Treaty — a kind of layered approach — has provided a basis for the verification procedures being discussed at the START negotiations. Under the proposed START treaty, systems will be reduced, not eliminated. Thus, the START framework will require a different degree of intensity and frequency of the various types of verification methods. Repeated verification of production and stockpiles would be required. In particular, the START treaty will have a greater need to use portal monitoring systems. The implementation of the two portal monitoring systems under the INF Treaty has provided useful experience in this regard.

A Change in the Atmosphere

In the early 1980s, during the first few years of the Reagan Administration, the US questioned the value of arms control as a process for dealing with the problem of nuclear weapons. They also accused the Soviet Union of violating the SALT Treaties and other arms control agreements. During negotiations, the US pointed to Soviet unwillingness to accept on-site inspection as proof that the Soviet Union was not serious about arms control. The accusations of non-compliance fed an atmosphere of distrust and acrimony between the US and the Soviet Union. In 1983 the Soviet Union left the INF and START negotiations in protest against the deployment of US intermediate-range missiles in Europe and refused to set a date for resumption of the talks. It was not until 1985 that negotiations began again.

In the wake of these divisive and unsuccessful years in arms control, the INF Treaty has acted as a confidence-building measure. It has changed the atmosphere, and proved that arms control negotiations can be successfully concluded and implemented.

IMPLICATIONS FOR NATO

Post-INF Situation

In the late seventies, NATO leaders were looking for a way to respond to Soviet deployments of the intermediate-range SS-20 missile. In a meeting in December 1979, NATO members, after much discussion, settled on the so-called dual-track or two-track decision. It called for deployments of Pershing II and ground-launched cruise missiles (GLCMs) to begin in 1983 (the first track), and negotiations with the Soviet Union to attempt to deal with the SS-20 problem through arms control (the second track).

The INF Treaty represents the successful completion of this latter process, eliminating all land-based nuclear missiles with a 500 to 5500 kilometre range. Once these missiles are completely destroyed, the two alliances will still face each other with massive conventional forces and nuclear weapons with ranges of less than 500 kilometres.

According to NATO the Warsaw Pact maintains a greater number of conventional forces than does NATO. In order to deal with this threat, NATO has said that it must rely on nuclear weapons to deter the Warsaw Pact from using its conventional superiority to attack or to threaten Western Europe. Without INF and shorter-range INF missiles, NATO will have to rely on nuclear weapons with ranges under 500 kilometres to carry out this deterrent function. Both NATO and the Warsaw Pact maintain a variety of nuclear weapons with this range, including missiles, aircraft-carried bombs, and nuclear artillery. However, in the category of short-range missiles, the Warsaw Pact has a distinct advantage — 1600 missiles to NATO's 88 Lance missiles.

The removal of INF and SRINF missiles has thrown a spotlight on the question of how serious the threat from the Warsaw Pact is and how best to deal with it. The Soviet Union has offered to eliminate missiles with ranges under 500 kilometres, as well as all remaining tactical nuclear weapons in Europe. Should NATO enter negotiations on this category of weapons? NATO has a commitment to modernize its short-range nuclear forces. Should this commitment now be carried out? If so, how?

Soviet Proposals

Just after the signing of the INF Treaty the Soviet Union put forward a series of proposals on short-range nuclear forces and conventional forces. In January 1988 Soviet Foreign Minister Shevardnadze proposed a complete elimination of "tactical nuclear means," effectively proposing the denuclearization of Europe. At the end of that year, in December 1988, the Warsaw Pact offered to forego modernization of its tactical nuclear missiles if NATO was willing to do the same. Also in December, as part of his speech to the United Nations, General Secretary Gorbachev announced that the Soviet Union would be unilaterally reducing its conventional forces. In Europe this would involve the removal and demobilization of 50,000 troops and their equipment from Eastern Europe.

The Problem for NATO

These proposals suggest a new future for Europe. They also directly challenge NATO's own plans for the future. In sum, the debate that has resulted within NATO has focused on three questions: whether NATO should enter into negotiations on SNF; whether a final goal of zero SNF is desirable; and, whether it is necessary to undertake a definite commitment to move ahead with the modernization of the Lance missile.

NATO Response

All three of these questions relate to West Germany and its position in the NATO alliance. A large number of short-range forces are deployed in West Germany. Due to their short range, if the missiles were ever used, they would affect primarily West German territory and population. Because West Germany represents the front line of NATO defence, it has the most to gain from SNF reductions. The West German population has been enthusiastic about Gorbachev's initiatives. The government of the Federal Republic of Germany (FRG) has therefore been inclined to pursue the proposals put forward by the Soviet Union. On this issue, the FRG found itself at variance with the other key NATO allies, notably the US and Great Britain.

The US and Great Britain were opposed to entering into immediate negotiations on SNF reductions. In addition, the US was opposed to the final goal of complete elimination of SNF. Great Britain and France were also wary of pursuing the elimination of SNF, because they were concerned about how this might affect their own nuclear forces.

NATO had previously committed itself to modernizing its SNF forces as part of its decision to withdraw a number of older tactical nuclear weapons. The dual-track decision of 1979 included a decision to remove 1000 short-range warheads from the NATO arsenal. At Montebello in October 1983 it was determined that a further 1400 SNF be removed by 1988. As part of these changes NATO's remaining short-range forces were to be modernized.

At the centre of the modernization question is the Lance missile, with a range of 110 kilometres. NATO has approximately 144 Lance missiles which were first deployed in West Germany in 1972. Since the Lance will remain effective until 1995, a final decision on its successor need not be made until 1991 or 1992. The West German position was that no commitment needed to be made until that time. The US wanted a decision sooner, at least in part because the US Congress needed to allocate funds for the initial stages in the development of a replacement.

A Comprehensive Concept

These questions came to a head at a NATO summit meeting at the end of May 1989 in Brussels. After considerable debate and negotiation a final communiqué was adopted which outlined a "Comprehensive Concept of Arms Control and Disarmament." The communiqué stated that SNF or "sub-strategic" forces were vital to NATO deterrence strategy above and beyond the role they played in countering similar Warsaw Pact weapons. Indeed it was stated that these NATO weapons ensure "...that there are no circumstances in which a potential aggressor might discount nuclear retaliation in response to his military action." According to the document, no alternative to this strategy of deterrence based on a mix of nuclear and conventional forces was possible in the "foreseeable future."

NATO decided that negotiations on short-range forces could begin once the implementation of an agreement on conventional force reductions and stability had begun. These negotiations would seek "*partial* reduction" (emphasis in original) of US and Soviet short-range, land-based missile forces to equal levels. A decision on a follow-on system to the Lance missile would be made in 1992; the Alliance expressed support for continued US funding of this alternative.

CONCLUSION

As the first US-Soviet Union bilateral agreement on reducing nuclear arms since the conclusion of the SALT II Treaty in 1979, the INF Treaty has provided an impetus to the arms control process. It is a successful treaty involving verification measures beyond NTM, and the implementation process has proceeded relatively smoothly. By the end of 1989 all shorter-range INF missiles will have been eliminated, and within another eighteen months all other INF missiles will be gone.

The removal of these nuclear missiles from Europe, in conjunction with the prospect of reducing conventional forces, has had important implications for NATO. The ensuing debate included a discussion of the role of nuclear weapons in Europe. NATO reaffirmed its position that a deterrent based on a mix of conventional and nuclear forces was needed. Negotiations on short-range nuclear forces will be started after the process of implementing a conventional arms agreement has begun.

Finally, although the INF Treaty has affected only four to five percent of the total of both superpower arsenals, it has demonstrated that arms control can work, and that the Soviet Union is serious about accepting on-site verification measures. The early 1980s were characterized by accusations of non-compliance with existing treaties, and acrimonious debate about the value of arms control. Reaffirming the effectiveness of arms control is perhaps the most important achievement of the INF Treaty.

NOTES

1. Numbers are from the US Department of Defense and the Soviet Ministry of Foreign Affairs, as quoted in the *Arms Control Reporter 1989*, p. 403.B.734.
2. *NATO Communiqué*, 30 May 1989, paragraph 44.

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